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Participatory Rural Energy Services in Karnataka: Technical Assistance

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Participatory Rural Energy Services in Karnataka: Technical Assistance

for

United States Agency for International Development

Under

South Asia Regional Initiative for Energy

Prepared by

Nexant SARI/Energy

List of Acronyms

APDRP	Accelerated Power Development and Reform Program
BESCOM	Bangalore Electricity Supply Company
CD	Compact Disc
DRDPR	Department of Rural Development and Panchayat Raj
DST	Department of Science & Technology
DVD	Digital Video Disc
ESCO	Energy Service Company
ESCOM	Electricity Supply Company
GoK	Government of Karnataka
GP	Gram Panchayat
IP	Irrigation Pumpset
ISO	International Standards Organization
Km	kilometer
kV	kilovolt
MBC	Metering, Billing, Collections
MoU	Memorandum of Understanding
MVA	megavolt-ampere
MW	Mega Watt
NRDMS	Natural Resource Data Management System
NGO	Non-Governmental Organization
RC	Resource Center
RCR	Resource Center Representative
RE	Rural Electrification
REB	Bangladesh Rural Electricity Board
Rs.	Rupees (Indian)
Rs. Crore	Rs. 10 million (approximately US$ 212,766)
SARI/Energy	South Asia Regional Initiative for Energy
SHG	Self Help Group
TBD	To Be Determined
T&D	Transmission & Distribution
US	United States
USAID	United States Agency for International Development

Contents

This document reports on the Technical Assistance activities provided by the South Asia Regional Initiative for Energy Project to the State of Karnataka for a Pilot Program in Participatory Rural Energy Services in Karnataka (PRESK).

The South Asia Regional Initiative for Energy (SARI/Energy) is a program of the US Agency for International Development (USAID) that promotes mutually beneficial energy linkages among Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka. One of the key energy issues facing SARI countries is how to convert their heavily subsidized and centralized public-sector electric power bureaucracies into consumer responsive, financially viable, market-based services. SARI/Energy's two pronged approach to rural energy supply has brought to light the successful model of the Bangladesh Rural Electricity Board. In March 2002, at the Delhi meeting of the Energy and Power Working Group of the South Asia Sub Regional Economic Cooperation (SASEC) Program, Government of India accepted the offer made by SARI/Energy to facilitate transfer of key management elements of the Bangladesh system to India. That agreement has initiated this work.

Within India, the Government of Karnataka (GoK) has become a leader in electricity sector reform, having announced a State Power Sector Reforms Policy in 1997 and passed the Karnataka Electricity Reform Act in 1999. In June 2002, four regional distribution companies were created; they are to be fully privatized in the near future. During discussions between USAID and GoK officials in November 2002, SARI/Energy agreed to design a series of intervention activities that would support the government's commitment to improving electricity services and collections in rural areas. Specifically, opportunities for involving local governments at the *gram panchayat* level were to be explored. In February, 2003, a small team of SARI consultants and staff visited Bangalore to define such a program. Over a three-week design period, the team met with the Department of Rural Development and Panchayat Raj (DRDPR), the Energy Department, the Bangalore Electricity Supply Company (BESCOM) and other key groups in Bangalore. They also visited four taluks within BESCOM's service area that were suggested as candidates for pilot activities. The conclusions and recommendations made by the design team were presented in the March 2003 *Report of Definitional Mission & Preliminary Work Plan*. Government of Karnataka later named this project 'Participatory Rural Energy Services in Karnataka (PRESK).

The Technical Assistance activities that flowed from those recommendations, and were implemented from March-October 2003, are the topic of this report. The design of tasks has kept in mind the short tenure of USAID interventions in PRESK and the possibility of handing over to other identified institutions. As of December 2003, SARI/Energy II (SARI/E-II), is underway as the successor project that will build and expand upon the work of SARI/Energy. PRESK, as a site-specific pilot program, is a unique experiment within the SARI/Energy program. It has made substantial progress, and holds considerable promise; there are good reasons for continuing support to PRESK under SARI/Energy-II for at least an additional 6-9 months. This Final Report therefore summarizes the activities, reports, and lessons already learned at the transition point between phases I and II of SARI/Energy and of PRESK – as a basis for continuing and further developing PRESK's pioneering efforts.

2.1 The Issues

As reported in the March 2003 Project Definition Report, the design team quickly recognized that the energy issues faced in the rural areas of Karnataka go far beyond the scope or resources of SARI/Energy. There are fundamental and long-term stresses on Karnataka's agricultural and rural development situation: growing population, increasing extraction of groundwater from borewells, and declining water tables. These problems have been exacerbated by a two–year drought, a dramatic fall in crop prices, and chronically poor electric power service. Many farmers do not have income to pay for electricity; even obtaining drinking water is becoming difficult in many areas.

Further, the team appreciated that BESCOM, just established in June 2002, inherited a legacy of mutual under-performance between power suppliers and rural consumers that has become entrenched over many years. The core issue seen by the team for rural electrification in Karnataka was sustained economic growth and the immediate need was empowerment. The question to be addressed is, therefore,: *How can the cycle of l underperformance be replaced by a positive, mutually reinforcing relationship between power suppliers and consumers?*

This is a difficult challenge, but the design team concluded that the time appears to be ripe for a serious effort to address it. BESCOM and the state government (GoK) have sincere interest in taking action quickly, since privatization is planned to be completed in 2004. And because of a decade of gradual progress under the 73 Amendment (Panchayat Raj Amendment) of the Indian Constitution, there are now strong grass-roots and GoK interests in developing governance and public service capacities at the GP level. For the rural consumers themselves, there is widespread recognition of the need to try new ways of farm and water management -- and for obtaining electric power. Thus all the key stakeholders at least in principle should support the types of interventions that a participatory approach could offer. In addition, recent improvements in information and communications technology and in electrical system components open new possibilities for improving distribution services.

The PRESK pilot program would build on these positive circumstances. It would identify specific opportunities for improvement, introducing technologies and techniques for testing and demonstration. Existing examples of "best practices" from Karnataka itself and elsewhere would also be identified, assessed, and promoted. All of these efforts would be documented and shared with rural consumers, local governments, BESCOM, and the GoK. The pilot program (PRESK) would attempt diverse approaches, some of which might fail. But there would hopefully also be some successes that could be built upon in the future.

2.2 Defining the Interventions, and Kick-off Workshops

As agreed with the Government of Karnataka (GoK), the USAID SARI/Energy consultants, both international and local, would work over the next 6 months with GoK and BESCOM counterparts. They would report to a State Level Monitoring Committee for policy and direction, and draw upon a Technical Committee for advice and assistance in technical matters. Local Committees made up of representatives at the taluk and GP levels would assist in each of the four taluks targeted as pilot areas. (See Table 2.1) Interventions were to have

tangible results, and potential to be replicated throughout Karnataka. The interventions would be implemented within SARI/Energy resource limits and completed by November. It was understood that the 6-7 months available was a very brief work period; PRESK interventions would likely need to be extended under SARI II.

Table 2.1 PRESK Pilot Taluks

Taluk, District	No. of GPs : Villages	Population : Electricity Customers ('000s)	No. of IP Sets
Doddaballapur, Bangalore Rural	29 : 326	170 : 73	9,352
Chintamani, Kolar	34 : 407	205 : 37	4,097
Molakalmuru, Chitradurga	16 : 92	103 : 25	4,410
Gubbi, Tumkur	33 : 100	250 : 37	10,317
Totals	112 : 925	728 : 173	28,176

The final set of interventions was decided upon through a series of meetings and discussions conducted during March-April, while a small SARI/PRESK office was being established in Bangalore. In May, half-day "Roadshow" workshops were organized by BESCOM in each of the four PRESK taluks. These local meetings were attended by representatives of the taluka GP's, local government representatives, Members of Parliament and Legislative Assembly, BESCOM, RDPR and DoE and the project consultants. The workshops were recorded in video. These workshops provided the formal kick-off of activities.

PRESK's technical assistance (TAs) activities evolved out of interactions the PRESK staff had with the farmers in the four taluks during the first two months of operations. The Government of Karnataka's penchant for e-governance and decentralization were also kept in mind. The TAs, thus, fall into three categories. First, there is the **Profiling of Energy Systems** – assessing and understanding the patterns and systems of energy and resource use within the four targeted taluks. Second, new approaches to **Communications** are being applied, both to provide better access to information of relevance to all stakeholders, and to improve dialog between energy suppliers and consumers in the four taluks. Third, are a series of "**Promising Practices**" that PRESK has identified. Some of these are already well proven, even within Karnataka, but are not widely applied. Others are transfers of successful practices commonly used elsewhere. And some are simply experiments, trying to create new approaches to the particular problems and opportunities found in the four taluks. A concise list and overview of results are presented in Table 2.2, and specific activities are briefly reported on below. A more extensive contextual presentation showing overall issues in Karnataka, what the Government of Karnataka is doing about them and what PRESK with USAID support is doing may be seen in Table 2.3.

Table 2.2 Overview of PRESK Activities, 2003

Category / Purpose	Activity	April-October 2003 Progress
1. **ENERGY SYSTEMS PROFILING** - understanding the local energy economy	**GIS mapping**	GIS maps & data identified
	Farmer Work Groups and surveys	Workgroups established in Chintamani; 300 survey interviews conducted
2.**COMMUNICATIONS** - accessing and sharing information at micro and macro levels	**Resource Centers**	Resource Center at Gubbi
	PRESK Resource Materials and Library	video and documents library established
	PRESK Website	Website up
	Motivational film	film completed
3.PROMISING PRACTICES		
Participatory Management – farm, enterprise, and governance models	**Demonstration farms**	5 demonstration farm "associates"
	Participatory Management Models	Hukkeri Electric Cooperative case study
		GP Kinnigoli case study
	GPs management manual	documenting of current GP management practices
	Bangladesh REB	first delegation of REB visitors to Karnataka
Technical– investments in the distribution system	**Technical losses**	Evaluation of losses in distribution systems study
		Technical review of 3EC Rural Franchise Proposal
Distributed generation - bottom up generation opportunities	**Distributed generation**	Feasibility study of biomass gasifier under contracting
Revenue management -- measuring and paying for rural electricity	**Revenue management**	Collection of data & procedural information recommendations for MBC improvement

Table 2.3 Major Issues in Rural Energy Services in Karnataka

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
1	Bad debt amounting to US$250 million and recurring costs of nearly US$130 million/year from 6000 GPs and 14 lakh IP set owners	Power sector reforms process	DISCOMs established		
		Principal amounts payable in installments; interest waived till Sep 30, 03			
		Privatisation of power distribution in rural areas	MoU signed with Grama Abhivriddi Mandali (Village Development Committee) at Kirugaval, Mandya district		
		Amendment to APMC Act under serious consideration			
2	Management capability	Satellite communication facilities	Set up at select talukas by ANSIRD	Propose to use satellite communication facility already existing at ANSIRD to interact with GPs of 4 talukas	Interactive session scheduled for Dec 6
		Infrastructure facilities at GP level	Funds allocated for providing PCs at GP level		
	Data pertaining to only street lights and drinking water are maintained at GP level				
		Grant amounts increased to Rs 5 lakhs for each GP			
		Raitha Santhe established in each taluka			

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
		Amendments to the Constitution proposed by Congress ruled states to give more power to GPs			
		Abolition of regional development boards			
3	Participatory management	Promote participatory management as against government responsibility	Debated	TA and capacity building to promote participatory approach	Road shows held in each of the 4 talukas; interviews held with farmers; taluka information collected
		MoUs to be signed between GPs and ESCOMs	Submitted to cabinet for approval		Comments provided on MoU draft
		Pass books to be issued to each GP and each farmer	Draft pass books made ready		Comments provided on pass books
				Changing mindset	Motivational film under production
				Several Management models under consideration	Visits made to all the 4 talukas and discussions held with Taluka Ex officers and GPs to assess present capabilities and infrastructure; comparative report prepared
				Peer Exchange between Bangladesh and Karnataka	Visited Hukkeri Co-op and

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
					Kinnigoli GP; Bangladesh REB Consultants visited
	Conflicting roles of deputy commissioners/ZP CEOs/TP EOs and GPs		Activity mapping done to increase the role of GPs	Management audit	
	Signing authority by Executive Officers			Management audit	
	Schemes announced by govt keep changing making a mockery of people's participation		Government schemes are amended for betterment of public services	Management audit	Propose to develop a GP Management manual
	Funds to be provided directly to GPs			Management audit	
	Resolutions held at GP meetings not heeded to by higher authorities			Management audit	
	ZP to deduct, at source, KPTCL arrears upto Rs 1 lakh from grants to GPs	Escrow accounts to be set up by ESCOMs for RDPR to deposit grants to GPs		Management audit	
	Reduction in political interference	Regulatory mechanisms		Management audit	
4	Communication & IT initiatives	E-governance	NCAER study declares Karnataka as a leading state in terms of e-readiness; World Bank's interest in participation		

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
		Information and communication technology initiatives in rural Karnataka	Natural resources data mapping done; Bagalur village, first to implement PURA (Providing Urban amenities in Rural Areas) Concept	Establishment of Resource centres with local managers with assistance from Dept of Agriculture, local NGOs, SHGs, etc.	1 resource center set up at Gubbi with local support from Agriculture dept.; ***PRESK*** website under design; ***PRESK*** brochure prepared; radio content being prepared
		GIS Mapping of Power Sector under discussion		GIS Mapping of PRESK talukas	GIS maps for Gubbi, D'pur and Chintamani talukas obtained from RDPR; More detailed GIS Maps for selected GPs under development
5	Revenue management in rural areas (software, hardware, manpower and stationery)	BESCOM's proposal limited to urban sub divisions; RDPR to provide PCs in GPs	BESCOM Tenders under scrutiny		
		KPTCL's proposal to employ 'Grama Vidyut Pratinidhis'	Implemented in 127 village panchayat limits		
	Irregular billing system, particularly for IP set consumers	Computerised billing & collection system	TCS software implemented upto divisional level	Cost of rural metering, billing and collection to be established and options to be proposed at GP level	Data collected and draft report prepared; draft report findings under discussion

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
		Regularisation of unauthorized IP sets	KPTCL's proposal of regularisation of 2 lakh unauthorized IP sets in one year under 'Own your Transformer (OYT)' scheme approved		
	Defaulters of electricity bill payments	Vigilance action to be strengthened			Discussed with Prof.Ranganathan, author of Farmers' 'Willingness to Pay' concept
	Wrong bills raised on defunct borewells		User to surrender connection to defunct borewell		
6	24 hr domestic power supply in rural areas	Single phase transformers to supply power to domestic consumers/BJ KJ installations	130 transformers to be installed at a cost of Rs. 73 million in a pilot project by BESCOM		
			Installation of programmeable electronic controllers (micro conductors) in rural feeders		
7	Drought / Water supply affected in rural areas	Independent transformers for mini drinking water supply schemes		Rural Energy- water management studies planned	Study initiated at Chintamani and work group established; 350 farmer interviews conducted

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
		River water for use as drinking water in drought hit districts			
	Farmers committing suicides due to bad debts	Grievance meets proposed in Raitha Samparka Kendras to redress farmers' woes on second Monday every month	Health and Crop insurance schemes for farmers; Ordinance to restrict interest rates charged by moneylenders		
		Water conservation/rain water harvesting in rural areas	Watershed projects implemented in select areas; Use of IP sets banned for paddy and sugarcane cultivation	Resource Centers to provide information relating to water/energy management beyond traditional supply options	Lectures on Water conservation and Rainfall Pattern arranged at Resource Center, Gubbi for the benefit of farmers
		50% capital subsidy to all farmers and **100%** subsidy to SC/ST farmers on drip irrigation and sprinkler irrigation equipment	Drip irrigation for sugarcane and chilli crops adopted	Rural Energy Water Management	Concept paper on 'Issue of subsidies on water management' by Jim submitted to Energy Dept, GoK
		Propogating Dr Renukarya's techniques in agricultural land productivity and model micro watershed for small and marginal farmers		Identification of success stories and documentation	Visited Dr Renukarya's model Bhadra demonstration farm in Davangere; recorded interview and op. features on video
		Summer cultivation of groundnut in Nippani, Belgaum district	Collaboration between UAS, Dharwad, SKVK (NGO) and local farmers		

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
8	Drying of borewells	Recharging methods to be adopted		Rural Energy Water Management	Dept of Mines & Geology to work closely with PRESK
		Legislation for movement of rigs and control extraction of groundwater to be introduced			
9	Drinking water pollution due to indiscriminate use of manure for plants and chemical fertilizers causing pollution in ground water; lack of drainage and septic tanks			To study the uptake of contaminants in agri products in select areas where contamination is recorded as per Dept of Mines & Geology	Discussed with Mr CN Swamy, JD of Agriculture (Development); places identified for further analysis; action to be decided
10	T& D system upgradation (Reconductoring, transformer replacement to prevent overloading and burnouts, HVDS, metering, etc.)	Investments under APDRP schemes			
11	High T & D Losses	Metering, loss assessment and implementation	Proposal by 3 EC under consideration	High priority to be given by BESCOM for implementation to reduce T&D losses	3EC DPR reviewed by expert and comments submitted to BESCOM; BESCOM is signing contract with 3EC as a distribution franchisee at Gubbi
	DSM activities not to be pursued by BESCOM			DSM options for reducing rural load	Funding need to be identified
		Energy auditing in urban feeders at sub divisional level	Energy audits done every month		
12	Power theft	Anti-theft law legislation brought in			

Sl. No.	Major Issues concerning rural energy services	What GoK have done/propose to do in Karnataka	Status	What USAID/Nexant plan to do under PRESK	Status
		Insulation of LT lines passing thru slums in urban areas			
13	Alternate sources of power generation	Establishing biomass power plants at rural tail ends	Scheme proposed for biomass and power exchange; World bank's interest in funding	Feasibility study proposed	Activity under contracting
		Promoting use of biodiesel as a fuel			
		Propogating Mr Mallikarjuna Arali's concept of using biogas DG set		Identification of success stories and documentation	Visited Mr Arali's farm in Ranebennur Taluk; recorded interview and operational features on video
14	Awareness/Capacity building	Training through satellite communication by ANSIRD	Training extended upto Mar 2004	Training through trainers at GP level proposed	Programs for GP elected members planned; training material in Kannada under preparation

3.1 Strategy for implementation of TA activities

While the overall objective of PRESK is to improve rural energy services through the involvement of gram panchayats, the TAs were to be designed taking into account the present level of infrastructure, computer literacy levels and the motivation levels as well as the short tenure of USAID interventions in PRESK to achieve any desired results. It was noted that the level of detail of the data and needed to be organized to suit the requirements. Additionally, awareness of best practices from even within the Karnataka state was poor indicating the need for documenting such practices and disseminating this information among the target taluks. Improvement in energy and water services was also to be demonstrated within the fiscal limits. Keeping these in mind, the following activities have been accomplished in the short span of time.

3.2 Energy Systems Profiling

(1) GIS Mapping - The federal Department of Science & Technology (DST), under its Natural Resource Data Management System (NRDMS) program, has developed digitized maps on a 1:250,000 scale, together with a Core Data base covering resource, demographic, agronomic, and infrastructure information. These provide the data of relevance to PRESK. But one of the four PRESK taluks is not covered by the NRDMS, and information on electric power infrastructure is lacking. PRESK can undertake to collate this missing information, to establish a map and information base line.

(2) Farmer Working Groups - Good information on the decision-making of farmers is needed in order to establish within each taluk an effective forum where a common understanding and appreciation of the "value of water" can be built between stakeholders – and where effective reform initiatives might be discussed and agreed to. In Chintamani, PRESK has formed workgroups to conduct and assess a detailed survey of agricultural water use. The survey was designed to determine the value of groundwater use, taking into account operating costs, debt financing, and income from sale of crops. The survey also addresses the investment and operating costs of the borewells as well as borewell yields and the on-farm water use practices.

An initial survey of more than 300 farmers has been undertaken in this initial phase of PRESK. When analysis of the surveys is completed, PRESK will have, for Chintamani, a very detailed profile of water use, cropping, and the value of water in use in agriculture that should be of wide interest.

3.3 Communications

(1) Resource Centers - The first PRESK Resource Center is housed in Gubbi, at the office of the Assistant Director of the local Agriculture Office. A full time Resource Center Representative (RCR) has been retained who has experience in energy and water programs, community relations, and use of information technology. Since operations began in mid-August, the RCR has met with over 100 local GP officials, IP set users, and

other farmers and provided them with information on improved water management and farming practices.

A User Profile is being developed, which feeds back also to the Rural Environmental Profiling task. The Resource Center is a "one-stop shop" where farmers can learn about water, watershed, farming, and energy topics, and share their own experience and concerns. Representatives of various government agencies also appear to be happy to have a new, multi-faceted channel to communicate through, and there is interest from the private sector as well. Outreach at the GP level is beginning, and additional resource center locations are being planned.

(2) Information Resource Materials and Library - A lecture series has been initiated that features respected local farmers and regional experts who can speak to their peers about best practices. The first lecture – "Rainfed Agriculture for Small and Marginal Farmers" - was attended by over 125 people was very favorably received. The lecture was videotaped and is being edited as part of the PRESK video library. Future lectures will address rainfall and water resources, groundwater resources, energy and water efficient farming practices and other topics of relevance. Closely connected to the lecture series are regularly scheduled sessions in which the local BESCOM representative answers questions and resolves complaints with electricity customers.

(3) Website - A PRESK website, designed specifically to broaden the RC's information dissemination capacity and provide general Internet access to PRESK, should be operational in early December, 2003.

(4) Motivational Film - PRESK has commissioned an award-winning film maker, Suresh Heblikar, to produce a film to motivate targeted communities to become involved in self-management of their resources. The film is rooted in Indian traditions of local cooperation and cultural values, and takes place in local settings, dramatizing real-life situations. It should be ready for screening in early December.

3.4 Promising Practices

(1) Demonstration Farms - In the course of field work, several innovative farms operating in or near to the four pilot districts have been identified. Each of the farmers has been keen to share their experience, and PRESK has produced "best practice" film documentaries and written materials on each that are being shared through the PRESK Resource Centers and other channels. These farms include:

- Hiremaganur Village, Ranebennur - a 24 acre farm generating it's own electricity from biogas derived from 12 buffaloes, 100 sheep, and chickens.
- Belekatte village, Davangere – a 5.25 acres farm using a 5-tier system of planting to boost water and solar efficiency.
- Bavikere, Tarikere -- 1 acre Model Micro Watershed Farm for marginal farme

(2) Participatory Management Models - From the outset, PRESK has been seeking appropriate organizational models for managing rural electricity services. Two models have been addressed so far:

- a cooperative society, and
- an association of GPs with common interests.

(i) Hukkeri Electric Cooperative Case Study

The Hukkeri Electric Cooperative Society has been operating at the taluk level in Belgaum District in northern Karnataka since 1959. PRESK staff and consultants visited Hukkeri, and subsequently compiled comparative performance information for the PRESK taluks. The cooperative society model in this case appears to have performed well, and merits further assessment for wider application in the future.

(ii) GP Kinnigoli Case Study of Water Management

Electricity distribution utilities share many similarities with water distribution utilities. Kinnigoli Gram Panchayat in South Kanara District is the first GP in Karnataka to provide metered drinking water for its rural households, and also to hand over the operation and maintenance of the system to local people. Kinnigoli provides a case study of how proactive participation from the people and local RDPR officials can create profitable, locally-managed, utilities.

(3) GPs Management Manual - The GoK is exploring possibilities for empowering gram panchayats to manage rural power distribution. A draft MoU has been sent to GPs that establishes a progressively increasing 3-step process for transferring local management of local electricity distribution services to GPs. Under level 1 of the MoU, all the dues to be paid by the GPs to ESCOMs will be reconciled and a complete census of the electricity connections will be undertaken. ESCOMs would meter all connections. At level 2, the GPs would act as the local agency of the ESCOM and be responsible for all activities needed to supply and maintain power supply. At the third level, GPs would also promote conservation of energy and water, drawing upon incentives granted by the government. The GPs are expected to volunteer to come forward and sign the MoUs with ESCOMs and Districts.

An important step in the process of building the managerial capacity of GPs would be the availability of a management manual prepared on the lines of ISO 9000/9001 standards for effective organizational management. Such a manual would help the GP members understand their roles and responsibilities as well as provide operational guidelines for performing their duties. The manual would help usher in professionalism, transparency and customer focus. PRESK consultants, in cooperation with the DRDPR, has audited and documented current procedures of GP management. This material is expected to become the basis for the management manual.

(4) Rural Electrification Board of Bangladesh - One of the motivations for initiating the PRESK project was an interest in adapting the highly successful techniques used in Bangladesh's rural electrification program. The Bangladesh program focuses on creating capacity for managing electrification at the local level, and has pioneered a number of technical innovations in local distribution services.

Three senior advisors to the REB program were brought to Karnataka from 18-23 May. They met with senior BESCOM staff, made presentations at workshops in Doddaballapur and Chintamani, and worked with the SARI/PRESK consultants throughout the week. Their observations and suggestions were well received both in Bangalore and at the taluks. At least one exchange visit to Bangladesh, drawn from key PRESK stakeholders, is planned.

(5) Technical Losses

(i) Evaluation of Losses in Distribution Systems Study

Transmission and distribution networks in rural India are characterized by long but low voltage (11 kV) primary lines, under-sized conductors, haphazard extension, poor quality construction and inferior components. Better planning and marginally higher investment in infrastructure appears likely to yield significant increases in operational and financial efficiencies. PRESK has drawn upon the expertise of very knowledgeable local engineers to review the extent of these technical losses, and the opportunities for addressing them.

(ii) Technical Review of 3EC Rural Distribution Franchise Proposal

Energy Economy and Environmental Consultants (3EC), recently submitted a detailed project proposal to BESCOM. Based on their assessment of line losses and inefficient use, 3EC is confident that with modest investment and support from BESCOM, they could establish a viable local distribution business based on savings and efficiency. BESCOM requested PRESK to undertake a technical review of 3EC's analysis, specifically to comment on (1) the methodology used for loss estimation, (2) the suggested methods of system improvement, and (3) investment estimates for suggested improvements. PRESK consultants provided the review, working with both 3EC and BESCOM to improve the analyses. Based on this review, BESCOM has made the decision to award the loss reduction contract to 3EC as a distribution franchisee.

(6) Decentralized Power Generation - Feasibility Study for Biomass Gasifier - Karnataka's daily power purchase is presently limited to 80 million units per day, although the unrestricted demand is estimated to be 105 million units per day. If generation capacity were added near the tail ends of distribution lines, it would have the double advantage of increasing overall power supply, and doing so where the grid voltage is lowest. Biomass gasification is a proven technology, appropriate to a number of situations in Karnataka. Generation of electricity from biomass would also strengthen the local economy by creating a demand for raw material, and local generation opens new possibilities for local investment and business development. PRESK is in the process of contracting for a detailed feasibility study within one of the pilot taluks, in hopes of attracting such an investment.

(7) Revenue Management – Recommendations for System Improvement - For many years, unpaid power bills have accumulated, for IP set users, the GPs themselves, and rural consumers generally. These arrears reflect economic woes, perceptions of poor service, and reliance on occasional political concessions (waiving of interest on arrears). Even without the arrears issues, the ESCOMS in rural areas face high costs for metering, billing and collection as compared to the revenue collected. As a first step to improving the worsening situation, PRESK is working to analyze the actual cost of metering, billing

and collection (MBC) systems in the four pilot taluks and to develop an appropriate MBC system for collection through the GPs.

Although PRESK has lasted barely seven months, several observations or lessons learned have emerged clearly. Some of these lessons appeared to be likely from the start, but can now be stated with some confidence; others have only come from the working experience of the PRESK Team. This is certainly not an exhaustive review, but addresses five principal observations that are of particular relevance as planning for future activities gets underway.

1. ***There is a general acceptance for participatory approach to rural issues, but, owing to other pressing problems, they require a strong motivation to take part***

The cooperation from farmers and their commitment have been more than satisfactory while conducting surveys for data collection or holding discussion meetings. There are also examples of best practices within the state which exhibit participatory mechanisms. There is ample evidence to state that farmers are generally in favour of participatory movement. However, they are invariably bogged down by many other problems such as drought, debt repayment, market fluctuations, etc. which do not allow them to think rationally. There is a strong need to motivate the farmers on a continuous basis to devote time to societal issues.

2. ***There is great need for organizing and synthesizing rural development information, and for making it more accessible – at both micro and macro levels.***

At the micro level, for farmers, considerable information and a wide variety of government and private (NGO) support activities are available at the local level in rural Karnataka. But the information is fragmented, generally accessible only from limited outlets of the specific agency or organization. It is unlikely that any single farmer could ever tap more than one or two of them. The pilot PRESK Resource Center in Gubbi is demonstrating the value of a "one stop shop" for agricultural, water, and energy information. In addition, there is a growing body of heretofore isolated knowledge and information found among farmers that have applied new approaches to agriculture with important economic results. Again, the PRESK Resource Center is serving as a window for sharing information and ideas to interested farmers.

BESCOM also appears to be benefiting by PRESK's ability to pull together expertise – information -- to focus in detail on topics that may be of interest to its management, but are beyond the normal capacity of BESCOM to accomplish. The technical review of the 3EC proposal for establishing a private franchise based on correcting losses was a good example. In addition, the study on improving metering, billing, and collection (MBC) and the Guidelines for the Evaluation of Losses in Distribution Systems study both appear to be useful for BESCOM's future work.

At the macro level, for GoK policy makers, fragmented and inadequate information appears to mean that the plight of rural farmers is generally underestimated. As information on the village energy profiles comes together, the linkages between energy-water-agriculture-poverty are becoming clearer – and more alarming. The situation appears to be more serious than anyone today can calculate – literally, since the data simply isn't pulled together for comprehensive analysis. Over the coming months, PRESK will continue collecting and assessing such information at the GP and taluk levels. Ultimately, however, such information needs to be integrated state-wide – a task beyond PRESK. Preliminary indications from a

detailed survey of farmer decision-making and water use, the first-ever of its kind in Karnataka, indicate that there are important policy implications both for resource management and agricultural economics. Although ultimately, such information needs to be integrated state-wide – a task beyond the scope of PRESK -- the project can play a useful role in planning and proposing appropriate studies that can provide accurate findings that would underpin improved rural development policies.

3. There are opportunities for significant improvements in the efficiency and effectiveness of local distribution lines and services, as well as in local farm productivity and efficiency.

The findings of the several studies completed under PRESK are discouraging in the sense that they confirm the serious technical, economic and social impacts of line losses from distribution system infrastructure that is inadequate, inefficient, and ineffective. However, they also show that substantial technical improvements are possible, both the distribution systems and in the basic metering and billing practices of BESCOM. These calculations need to be pushed to actual demonstration, or at least to a full feasibility stage.

Similarly, the several Model Farms that have been found in or near the PRESK taluks show the tremendous potential for improving farm productivity through better water and power management. Already these models are being studied by farmers who learned of them through PRESK's Resource Center at Gubbi. The dire financial and emotionally depressed conditions of numerous farmers, suffering from the absence of adequate information, adequate knowledge techniques, and adequate support, suggest a great need for such information.

4. GP's are generally not ready to take on the kinds of formal duties outlined in the GoK's proposed MoU, but they are interested in developing their management capacity. Meanwhile, other options for local management of electricity distribution services appear promising

Currently, GPs have very little capacity to take on the functions outlined in increasing levels of responsibility (Level 2 or 3) of the draft Memorandum of Understanding (MoU) between BESCOM and the GP for managing rural distribution services. This limited capacity is coupled with traditional dependence upon government to provide electricity and other utility services. PRESK's GP management audit research will hopefully be a step toward enabling GPs to take on basic utility management functions. But there are other possible options for creating local electricity service entities. The Hukeri and Kinnigoli case studies are proven demonstrations of trust, leadership and cooperation from Karnataka itself that have led to financial and social success. Their stories can be shared and used to stimulate discussions of new approaches. In addition, the initial visit of REB advisors in May will be followed by a visit to observe REB's highly acclaimed work, and the Nepal Electricity Authority recently initiated a community based rural electrification program that appears also to have relevance to Karnataka.

Under the 2003 Electricity Act, there are new opportunities for private entrepreneurs and for communities and other organizations to establish generation and distribution services. The PRESK feasibility study for a decentralized biomass power plant should help to establish a technical and financial model, and hopefully lead to an actual investment project that is

economically and socially sustainable. Further studies and demonstrations for sustainable, small-scale infrastructure development at the community level are needed, and will be undertaken.

4. Energy usage cannot be viewed in isolation but has to be seen in the overall context of agriculture as well as ground water availability.

It is now well understood that energy usage by farmers is very much dependent not only on its supply pattern but also on ground water availability. As the ground water table recedes, farmers tend to drill deeper and deeper and use higher capacity pumps to draw out water. This is irrespective of the fact that the power supply pattern in rural areas is highly unpredictable. There are also wide fluctuations in the agricultural market forcing the farmers to grow high income varieties without any consideration to water intensity. Energy usage, therefore, has to be correlated to the agricultural produce as well as water consumption. Farmers may be able to understand water and energy shortages but may not perceive the interlinkages between these resources vis-à-vis agriculture activities. It is very important to educate the farmers about this linkage.

The principal key to addressing the problems of PRESK for the Government of Karnataka is to see their solution as an integrated approach to rural development, and not as discrete energy, agribusiness and water problems. This will require embedding understanding among key Government of Karnataka policy makers and other influencial leaders.

5. Basic understanding of the decision-making of farmers is inadequate for sound policy making.

PRESK undertook a detailed survey of farmers in Chintamani. Such an effort was necessary because there simply was no good existing information source available to understand how local farmers value their water or make their decisions on energy and resource use. The results of the 350 individual surveys are currently being tabulated and assessed. It is safe to guess that there will be some useful insights that can be applied to future public policy decisions about water, energy and other agricultural development resources.

It has been sometimes painfully clear that farmers and BESCOM electricity suppliers do not understand each other's businesses. Farmers, and GP committee members, know little if anything about the generation and transmission of electric power, or the market forces and constraints that drive it. Similarly, BESCOM staff know little of the factors that a farmer must consider in his daily life. Introducing information about the electricity supply business through the PRESK Resource Center has begun. The Chintamani survey should provide us all – including BESCOM's staff both in the field and in Bangalore -- with a better appreciation of the farmers' market forces and constraints.

6. PRESK's role is limited.

PRESK's mission is to understand local energy systems, improve communications and access to information, and to identify, assess, demonstrate, and promote better practices for rural energy services in Karnataka. There are many challenging needs and promising opportunities for the PRESK Team to take on. But replication of successful models on a larger scale will be done by the GoK, private sector, or NGOs -- not by PRESK. SARI/ PRESK can shine a light on promising practices, but it is Karnataka's people and institutions

that must decide to follow the path and make progress in following it. In other words, PRESK is not itself going to solve rural Karnataka's energy problems, but it can help to catalyze successful efforts by the stakeholders who can.

The PRESK team initially perceived the project as a way to address BESCOM's rural financial and managerial problems by working as agents of change through BESCOM. But it soon became apparent that PRESK could best operate at the local level as an independent, neutral player. PRESK's role lies between electricity consumer and service provider.

With these limits clearly recognized, PRESK's independent and catalyzing role appears promising. A foundation of study and action has been laid. Initial results are encouraging. During the coming six to nine month period, it should allow for substantial progress and accomplishment. But all of PRESK's main initiatives -- profiling of local energy systems, improving communications and access, and introducing better practices -- are likely to need substantially greater resources of time and effort than SARI/Energy can provide. So, the SARI/PRESK Team will have to give due attention to whether – and how -- the work should be sustained beyond SARI.

Section 5 Considerations for Continuing Activities

5.1 PRESK as a SARI/Energy Pilot Program

PRESK is a unique donor-Government of India (GoI)) initiative addressing power sector reform as an issue of local governance and local private sector mobilization. The "participating beneficiaries" are the GPs and electricity consumers in the four targeted taluks. GoK Partners are the RDPR and Energy departments, and BESCOM. The principal focus of PRESK is on enabling local governing bodies (gram panchayats) and others to eventually take on management of selected RES functions (e.g., billing and collections). All the partners share PRESK's mission; SARI/Energy's role is to build linkages among their individual efforts. In addition, SARI/Energy also works to infuse good practices that have been successfully demonstrated elsewhere in the South Asian region.

During the period April-November, 2003, the PRESK team – comprised of participating beneficiaries, GoK partners, and SARI/Energy's local and international experts -- has established PRESK as a significant player on the front line of Southern India's critical water-energy-rural development battle zone. The team has also initiated key partnerships, surveyed the realm of existing efforts and priority opportunities, and substantially progressed on a range of promising innovations in local energy-resource systems profiling, communications, and techniques and technologies.

These efforts need to be strengthened atleast for a 6-9 month period, in preparing pilot GPs to adopt selected RES functions, imparting greater understanding at the village level on interrelationships between local energy systems, agricultural and irrigation practices and water availability, improving communications and access to information, and demonstrating good practices that can improve the quality of power supply while ensuring the long-term sustainability of the rural sector. Several additional activities – most notably a financing component – will round out the PRESK pilot program. Training activities, which have been aimed at strengthening the capacities of GPs to respond to the GoK's proposed MoU, will now need to be integrated in support of specific PRESK interventions.

PRESK is a unique hands-on, grassroots, pilot program for SARI/Energy. All of the activities currently underway, or that will be added can be "completed" and passed on either to BESCOM, RDPR, or to GPs, community groups, and local entrepreneurs. The 3EC Rural Energy Franchise is an example where PRESK has already completed a successful hand-off; based on PRESK's technical inputs, BESCOM will provide funding for 3EC to implement the franchise. The additional 6-9 months of the pilot efforts can confidently be predicted to yield several tangible results, including transfer to local and/or international counterparts while SARI/Energy shares and adapts PRESK's experience to the larger region.

However, the SARI/Energy team will also determine whether there is a set of PRESK activities that merit continuation as a distinct program beyond the horizon of SARI/Energy pilot support. Is there a "PRESK model" that could usefully play an on-going role in decentralizing electricity services in Karnataka? If so, the case will also need to be made, quickly, to GoK or potential donors, for extending or reincarnating PRESK.

5.2 Continuing Work Plan

A detailed "continuing work plan" for PRESK will be completed during December 2003. The basic outline for the work plan is already clear, and is summarized in Table 5.1. But strategically, the State Level Monitoring Committee Meeting, held at BESCOM's central office on November 18, has clearly established GoK's aspirations.

The Monitoring Committee meetings have been held every 2 or 3 months, providing an opportunity for senior representatives from RDPR, Energy, and BESCOM to meet with USAID and the SARI/Energy consultants to review the progress of PRESK's activities and consider possible adjustments or new directions. The November meeting was of particular significance, since it marked key transitions for all of the PRESK partners. For the BESCOM and the Energy Department, the draft MoU is no longer an exclusive focal point for devolving electricity distribution services, and for RDPR, there is new commitment to addressing rural energy issues. For both the SARI/Energy consultants and USAID, a number of activities are substantially completed, and SARI/Energy II is underway. PRESK now moves into second phase of SARI/Energy.

5.3 Considerations for continuing activities under PRESK

PRESK now has a track record and achievements that raise its potential value to the GoK partners as well as to the local participating beneficiaries. Following from the November 18 meeting of the State Level Monitoring Committee meeting and associated discussions within the team and with USAID, several "next step" issues emerged that need consideration as planning and implementation of activities proceed.

(1) Institutionalizing the PRESK Partnerships

Now is the time to cultivate regular day-to-day working relationships within the PRESK Team. The SARI/Energy consultants have developed a good understanding range of stakeholders, and their work, as it progresses, should be of increasing usefulness to GoK partners. During the November 18 meeting, the idea of establishing a "PRESK Cell" within the state government was proposed. RDPR's Rural Energy Directorate appears to be a promising initial home for such a cell, or formal team unit. One or more RDPR staff will need to be dedicated to the unit, and representatives from key agencies should be formally assigned. Perhaps most importantly, the SARI/PRESK consultants need to proactively cultivate this new unit, on a weekly if not daily basis.

(2) Linking PRESK to Policy

Although PRESK is a hands-on pilot program, many of the interventions being assessed or developed by PRESK have policy implications. Either they give insights to policy issues, or, to be sustained in practice they will need regulatory or policy support. A starting point might be for PRESK to prepare a background white paper, giving the baseline context of rural electrification policy and programs for the state. A fundamental issue is the overall level of state budget subsidies for power, water, and agriculture, and the basic options for reallocation of those expenditures into an integrated, more productive and sustainable package.

(3) Broadening the Menu of Local Management Options

When PRESK was designed and first underway, the GoK was focused almost exclusively on its draft MoU for the GPs. The MoU is still on the table, but the recent decision to settle arrears payments has removed most of the leverage that BESCOM and the Energy Department had to promote the MoU. This opens the door to a wider range of options for local initiatives by government and entrepreneurs. PRESK I had already begun identifying and assessing such models; that effort now should be expanded.

(4) Integrating the Training Components

Till now, Training and Capacity Building were managed as a separate program, consistent with the structure of SARI/Energy I. Now Training and Capacity Building can be fully integrated with the SARI/PRESK Technical Assistance. This integration process needs to be handled quickly and completely, in order to assure optimal use of trainers as well as module programs already developed. As PRESK institutionalizes its relationships with RDPR, options for integration into the state government's overall training of GPs need to be assessed, and formal training (classroom modules) and informal capacity building (Resource Center, model farm visits, media broadcasts, etc.) need to be grafted in to regular local institutions.

(5) Reviewing the Role and Exit Strategy for Each Activity

SARI/Energy-II support to PRESK is predicated on designing interventions (TA and Training) that are modular in concept and that enhance the ability to transition ownership and implementation support to appropriate stakeholders (e.g., GoK, Distribution Companies, multi-lateral banks). Each intervention needs a clearly defined exit plan and a strategy that maximizes the potential for eventual adoption and wider implementation of successful interventions. In the course of preparing the new PRESK work plan, each of the on-going and proposed new activities will be reviewed. What has already been achieved? What are the resource demands and durations? How do they fit with other activities and the overall strategy? And what are their exit/transfer strategies?

A starting list of candidate institutions for hand-off and transfer of PRESK results and programs is included here in Table 5.2.

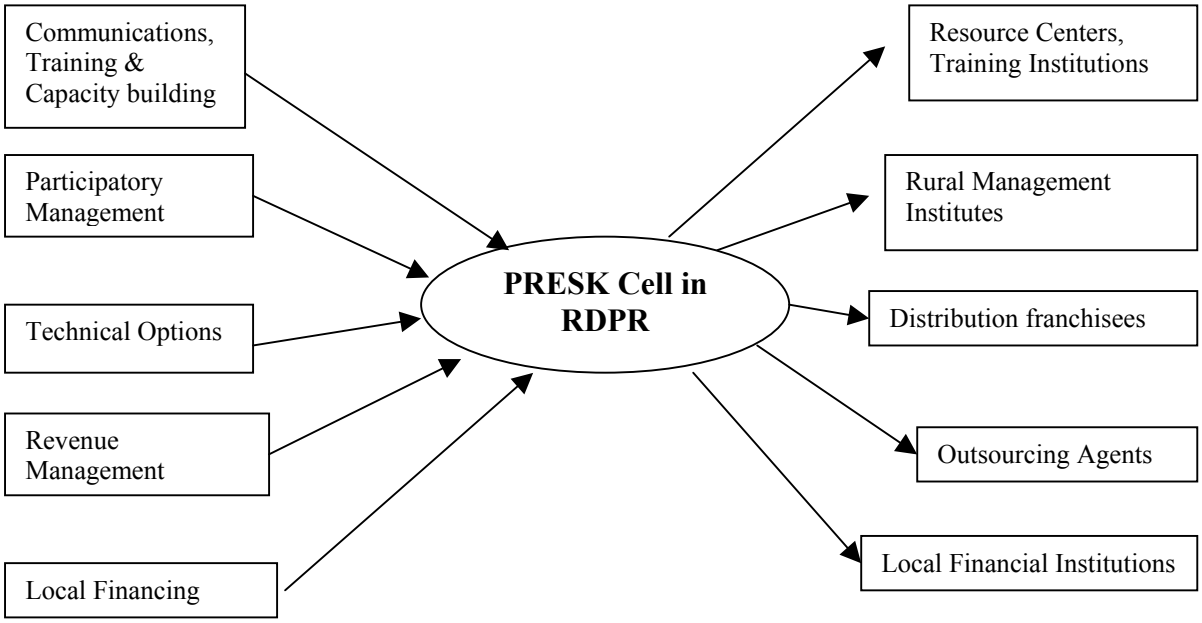

Figure 5.1 PRESK Cell in RDPR

Table 5.1 - Overview of new PRESK Work Plan

Energy Systems Profiling	Description	Purpose
GIS mapping	Simple integration and Resource Systems Analysis	GIS work will integrate GoI Department of Science and Technology's Natural Resource Data Management System, and work of GoK Mines & Geology Department. Outputs will provide better information for planners to coordinate energy supply expansion with natural resources management (e.g., aquifers)
Farmer Work Groups	Determination of farmers' valuation of water, and implications for policy	Both mapping and work group resource evaluation work will be shared with Rockefeller & Ford Foundations; PRESK techniques derive from their work on Agro-Ecosystems Analysis.

(continued on following page)

Table 5.1 - Overview of new PRESK Work Plan (Continued)

2. Communications, Training/Capacity Building	Description	Purpose
Resource Centers	Pilot 1-2 RC models as options to compliment existing RC model	As means to strengthen stakeholder communications these interventions can be applied within government, donor, NGO and private sector programs. During PRESK II, an evaluation review of effectiveness of each technique will be prepared, and shared. Possibilities for establishing a private business model for rural information centers will also be explored.
Resource Materials Library	Translate phase-I training materials to local language; expand data resources; improve village/farmer access	
PRESK Website	Continuous improvement of Website	
Motivational film	Dissemination circulation of film; possible sequel	
***Social marketing & advertising**	Local test campaign to evaluate local effectiveness of information dissemination using advertising medium on issues covering electricity, energy efficiency, water management	
RES business training	Develop training materials and develop local training capacity necessary to be self-sustaining	Hand-off to local training schools/institutes.
PRESK training institutions	Several institutions have been identified for potential adoption of PRESK training role. Explore potential role of SARI partners and other regional stakeholders to support or supplement on long-term basis.	Provide basis for wider rollout of training and capacity building activities necessary to achieve GoK energy sector objectives. Promote potential regional and cross-border linkages that support and mutually reinforce each other and that support transfer of good practices.

* = new area, not undertaken in Phase I

Table 5.1 - Overview of new PRESK Work Plan (Continued)

3. Promising Practices	Description	Purpose
Participatory Management		
Demonstration farms	Water/energy benefits of improved farming practices will be promoted.	Possible adoption by agricultural department, NGOs, donors.
Participatory Management Models	3 Participatory Management Models "packaged" and promoted to potential implementers –GPs, entrepreneurs.	Feasibility studies and start-up with interested implementers could be picked up under DRUM, or other donor or pre initiative.
GPs management manual	Manual will be completed	Manual will hopefully be adopted by RDPR for on-going use
Bangladesh REB	REB training programs to be translated, PRESK partners to visit REB	This is good pilot for SARI/Energy Rural Energy Supply and Distribution Training Centre, and might be continued under that program.
Technical Options		
3EC Electricity Franchise	3EC model under BESCOM funding.	APDRP or DRUM support is appropriate for each; private sector adaptation likely; and results should be shared with other donors.
Technical losses	Losses study to become proposal to APDRP	
Distributed generation	DisGen feasibility conducted.	
Small Scale Sustainable Infrastructure*	Several S3I examples demonstrated.	
Revenue management		
Improved MBC	Improved MBC demonstration program with BESCOM.	Continuation by BESCOM, sharing with other ESCOMs
Local Financing		
Rural Energy Capital Survey & Options	Will be built in to S3I work, with best practice transfer from region.	Continuation by private sector.

Table 5.2 Candidate Institutions for Hand-Off and Transfer of PRESK Results and Programs

NGOs	- Grama: NGO in Gubbi - Abhivruddhi: Society for Social development in Gubbi - Pragathi, Bangalore - Karnataka Watershed Development Society, Bangalore (KAWAD) - Agriculture Man Ecology Foundation (AME), Bangalore. - Eco-Watch, Center for promotion, Bangalore - Mysore Rural Development Agency (MYRADA) - Asian Institute for Rural Development, Bangalore - ASTRA/ IISc, Bangalore
SHGs:	- Sthree Shakthi (women empowerment)
Cooperative Agencies	- Water use groups - Rural Electric Cooperatives - Indian Farmers Fertiliser Cooperative Ltd (IFFCO)
Companies	- Compusol - Computerisation of GPs - Thematics - GIS mapping
ESCOs	- 3 EC, Bangalore - ESCO Electronics, Bangalore - INTESCO, Bangalore
Public Sector	- BESCOM: HQ and taluk sub divisions
GoK Departments	- RDPR dept, Taluk Panchayats, Gram Panchayats - Department of Energy (Power Sector reforms) - Agriculture department, Bangalore and Taluk levels - Dept. of Mines and Geology, Bangalore and taluk levels - University of Agricultural Sciences, Bangalore - Abdul Nazir Sab Institute of Rural Development (ANSIRD), Mysore - Mahatma Gandhi Inst of Rural Energy & Development, Bangalore - Drought Prone Area Program (Watershed dept) at Taluk level - Department of Horticulture at taluk level - Karnataka State Council for Science & Technology (KSCST) - Karnataka Renewable Energy Development Ltd. (KREDL)
GoI Departments	- Power Systems Training Institute, Bangalore - CPRI, Bangalore
International Agencies	- World Bank - Asian Development Bank - USAID

Appendix A PRESK Staff and Consultant Team for Technical Assistance

PRESK Staff

David Zoellner	Project Manager
S. Gopinath	Senior Consultant
K. Gopal	Systems Analyst/Business Specialist
G. Manjunath	Research Assistant/Engineer

Nexant Staff Consultants

Bob Burdett	Communications
Steve McCoy-Thompson	Water and Energy Systems
Jim Stephens	Water Resources
Anand Subbiah	Energy Systems

Local Consultants

Balasundaram	Information Systems &Business Accounting Specialist
Baskar N	Rural Development Specialist
Sengupta Prof	Distribution Engineering Research
Suresh Heblikar	Film Maker
Manjunatha K.S	Resource Center Representative
Krishna Mohan	Business Analyst
Palanisami, Dr	Director, Water Technology Institute
Venkata Subbah Rao	Transmission and Distribution Specialist
Brinda N Rao	Translator

2003 Date: Meeting PRINCIPAL ISSUES/DECISIONS:	ISSUE/DECISION STATUS (as on 17 Nov '03)
24 February : Definitional Mission wrap up	
Setting up State level Monitoring (SLMC) Committee, Technical Committee (TC) and Taluka level Implementation Committee (TLIC)	Set up vide Govt. order No. RDP.114.GPA.2003 Bangalore dated 25 March 2003
11 April: State Level Monitoring Committee	
1. Reconciliation of GP accounts to be completed by May 15 2. Issue of pass books to all GPs to facilitate monitoring electricity consumption 3. Involvement of Department of Mines & Geology in the SLMC 4. Road shows to be held in the 4 targeted talukas as follows: May 20: Doddaballapur May 23: Chintamani May 27: Monakalmuru May 30: Gubbi	1. Reconciliation under progress 2.. Pass books have been prepared and distributed to the GPs 3. Department of Mines & Geology has been included in the SLM Committee 4. Road shows have been held on the specified dates at the 4 talukas. Nearly 100-150 persons constituting GP members and IP set owners attended each of the meets.
29 April : Technical Committee	
1. GP data to be provided for profiling 2. GIS mapping of rural feeders may be undertaken 3. Worst feeder is to be identified in each taluka for system up gradation 4. Metering of all transformers to be done; a list can be prepared of all metered transformers 5. Training may include maintenance of electrical equipment 6. Billing software needs to be explored 7. Regularization of unauthorized IP sets may be undertaken 8.. The 3 EC report may be technically reviewed for comments on loss estimation and the investment proposed. 9. The preparation of training material in Kannada will be coordinated by Vidya Shankar of DOE and SP Kumar of BESCOM 9. The road shows will cover the TAs and schedule of training programs as well as proposed draft MoU. DOE will instruct BESCOM and Taluka EOs to make necessary arrangements for the road shows	1. Relevant GP data have been obtained 2. GIS mapping of rural feeders is yet to be contracted 3. Worst feeders have been identified in each taluka 4. Metering work is being undertaken 5. Training materials under I phase have been prepared 6. Billing software has been studied under the MBC study 7. The 3 EC report has been technically reviewed and comments submitted to BESCOM. BESCOM has taken decision to award distribution franchisee work to 3 EC 8.. Kannada materials have been prepared 9. All the 4 road shows have been held as per schedule

CONTINUED:

2003 Date: Meeting PRINCIPAL ISSUES/DECISIONS:	ISSUE/DECISION STATUS (as on 17 Nov '03)
8 May : Technical Committee	
1. Proforma to be prepared for data collection from GPs	1. Proforma prepared and data collected from GPs and BESCOM
2. BESCOM has allocated Rs. 20 million for system up gradation of worst feeders	2. Due to financial constraints, funds have not been released for system up gradation
3. Arrangements and invitees for the road shows have been finalized	3. Road shows have been held and expenses have been repaid to BESCOM
19 June : State Level Monitoring Committee	
1. To set up and activate the TLIC; TLIC can also be registered as a Society to sign the MoU with BESCOM	1. Not done
2. Agriculture Dept to provide assistance for setting up Resource centers at targeted talukas	2. Agriculture Dept has offered office space and computer to set up Resource Center at Gubbi taluka
25 July : Technical Committee	
1. KPTCL to make available video cassettes to make copies for showing at the Resource centers	1. Copies have been made of KPTCL cassettes and CDs are made available at Resource Center at Gubbi
2. Worst feeders have been identified in each of the targeted talukas for system up gradation	2. System up gradation of worst feeders has not been undertaken
11 August : State Level Monitoring Committee	
1. To get GPs involved in the process through personal meetings and training	1. Several interactive meetings with GPs have been held at the taluka level and many GP members have shown interest in PRESK activities
2. To prepare training materials in local language and in simple terms	2. Training materials have been prepared in Kannada
3. To assist RDPR in reviving the power generation plant while taking up the DisGen study	3. DisGen study is yet to be contracted
18 November : State Level Monitoring Committee	
1. Reconciliation of GP accounts to be completed by 15 Dec.	
2. Metering of all street lights will be done	
3. Institute of Social and Economic Change, Bangalore will undertake study on 'Affordability of GPs to pay **140%** rise in electricity tariff'	
4. Electricity module can be integrated into the proposed 'Water module' in the ANSIRD programs for GPs.	
5. Computers will be made available to GPs	
6. MoU not yet approved by cabinet; however MoU can still be signed with GPs on the same lines as GVPs.	***All actions will be monitored in due course of time***
7. REC has shown interest in PRESK activities; PRESK can discuss for further action	
8. A PRESK cell can be set up to strengthen PRESK activities and monitor actions	
9. DisGen study may be undertaken keeping in view the TERI study on biodiesel plants for reconstruction	
10. PRESK can work on demonstrable models for participatory mechanism	

Appendix C PRESK CD & Video Library, as of October 31, 2003

PLACE	CONTENT	DATE	TYPE	TAPE NO. T#	APPOX. LENGTH	CD NO. C#
Bangalore	Bangladeshi electric coop interviews	21.05.03	VHS	1	30 mins	1
Bangalore	Vijay Kumar (Energy) interview	11.06.03	Beta	2	15 mins	2
Bangalore	B.L. Meena (BESCOM) interview	11.06.03	Beta	2	15 mins	2
Bangalore	Raghanundan (RDPR) interview	12/06.03	Beta	3	15 mins	2
Chintamani	Workshop	23.5.03	VHS	4	3 hrs	3,4,5
Chintamani	GP and farmer's interviews	4.6.03	Beta	5,6,7	3 hrs	6,7,8
Doddaballapur	Workshop	20.5.03	VHS	8	3hrs	9,10,11
Doddaballpur	GP and farmer's interviews	22.5.03	VHS	9	3 hrs	12,13,14
Gubbi	Workshop and Reception at office	30.5.03	Beta	10,11,12	3 hrs	15,16,17
Gubbi	GP and farmer's interviews	9.7.03	Beta	13,14,15, 16,17	2.5 hrs	18,19,20
Molakalmuru	Workshop	30.5.03	VHS	18	3 hrs	21,22
Molakalmuru	GP and farmer's interview, MYRADA-CIDOW project	25.6.03	Beta	19,20,21,22	2 hrs	23, 24
Ranebennur	Bio-gas generator and Agri Expert	27.6.03	Beta	23	.5 hr	25
Hukkeri	Electric Co-operative-facilities + MD's interview	17.6.03	Beta	24	.5 hr	26
Hukkeri	Resident Engineer's interview and consumers responses	17.6.03	Beta	26, 27	.5 hr each	27

Hukkeri	Vice Chairman, Finance Manager and Management In Charge	18.6.03	Beta	28,29	.5 hr each	28
Davangere	Bhadra Farm: Dr Renukarya	19.6.03	Beta	30, 31	.5 hr each	29
Ranebennur	Farmers response + Biogas farm	19.6.03	Beta	32, 33	.5 hr each	30
Bavikere	Dr Rudraradhya's model farm	21.8.03	Beta	34-36	.5 hr each	31, 32

Appendix D PRESK Technical Reports Completed

PRESK Staff, *Report of Definitional Mission & Preliminary Work Plan,* March 2003.

PRESK Staff, "Lessons for Renewable Energy Systems from Recent SARI/Energy Efforts in Rural Energy Services," a Presentation for the SARI/Energy Conference on Innovative Approaches to Implementation of Renewable Energy Systems: Promoting, Financing, and Capacity-Building for Environmentally Friendly Energy Systems, Colombo, Sri Lanka, June 11-12, 2003.

Prof Sen Gupta, "Technical Review of Detailed Project of G Hosahalli feeder, Gubbi, prepared by 3EC for BESCOM", June 2003.

Krishna Mohan, Strategy for Setting Up Independent Business Establishments at the GP Level", October 2003.

Balasundaram, "MBC in Rural Areas," October 2003.

V.Venkata Subbarao, *Options for System Upgrades for Rural Power Distribution Networks and Identification of Equipment, Instruments, Aids*, October 2003.

Appendix E PRESK Documents Library, as of October 31

Sl. No	Title	Source
1.	A Study of IP users in Karnataka	Xavier Institute of Management
2.	Rural Power Distribution: The key to Power Sector Progress	IDFC
3.	Executive Summary of Social Assessment: KPSR&PP	Centre for Management and Social Research
4.	Presentation of Energy at a Rural Substation	Energy Economy and Environmental Consultants.
5.	The Small Scale Infrastructure Development Fund, Inc	The Small Scale Infrastructure Development Fund, Inc
6.	Distribution loss Segregation	Probably BESCOM
7	Monthly Progress Report on a pilot Project on Community Involvement in Rural Power Distribution	BESCOM-XIMB
8.	E&I works at Budigere	
9	Ban galore Electricity Supply Company Ltd, Doddaballapur Subdivision.	BESCOM Doddaballapur Sub division
10.	Water Quality Analysis Report, Manakalmuru taluk	
11	Santhakalli Gram Panchayat, Chintamani taluk. A Brief Report	
12	Resource Service Centres in Kolar, Chitradurga Gulburga districts in Karnataka and Ananthpur District in Andhra pradesh	
13	Schools information	Block Development Office, Chintamani taluk, Kolar dist.
14	Module for Change	Deccan Herald
15	Targets and Achievements of Health and Family Welfare Dept	Taluk Health Office,Chintamani
16.	Chintamani Taluk, General information	
17	A Brief note on watershed activities in Chintamani Taluk	Watershed Development Department, Chintamani taluk
18	Seasonal and Crop status report of Chintamani taluk, Kolar district	Asst Director of Agriculture, Chintamani
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MAPS

1	Chintamani taluk, showing watershed projects, colr coded	
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